







# 1977 CENSUS OF CONSTRUCTION INDUSTRIES

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Industry Series

Preliminary Report

## U.S. Summary—Construction Industries and Subdividers and Developers

During 1977, the establishments with payroll which were operating primarily as general contractors, operative builders, special trade contractors, or land subdividers and developers had business receipts of \$222.9 billion. Of this amount, \$213.5 billion were receipts for construction work, an increase of 43 percent compared with 1972. Their payments for construction work subcontracted to others amounted to \$49.3 billion leaving net construction receipts of about \$164.2 billion. Total average employment showed an increase of 3 percent from 1972 to 4.3 million employees. Payroll for 1977 amounted to \$54.8 billion. Value added at \$98.5 billion in 1977 was 44 percent more than in 1972.

This report summarizes the data from the preliminary reports already published for each of the industries covered by the 1977 Census of Construction Industries. Establishments have been classified in construction industries in accordance with industry definitions described in the 1972 SIC Manual.<sup>1</sup>

For this census, a "construction establishment" was defined as a relatively permanent office or other place of business at which or from which the usual business activities related to construction were conducted. A separate census report was required from each establishment but not from each construction site. Instead, the data for work at each site were included in the report from the appropriate office or branch office. Foreign construction activities were not included in this census.

The 1977 Census of Construction Industries is the sixth census of construction establishments in the United States. As in previous years, it was conducted jointly with the censuses of mineral industries, manufactures, retail trade, wholesale trade, and service industries under authority of title 13 of the United States Code. Although the first construction census was conducted covering 1929, only the data from the censuses of 1967 and 1972 are comparable with the 1977 data.

The 1977 estimates for establishments with payroll in all of the construction industries are based on reports from a

probability sample of approximately 181,000 establishments selected from about 536,000 construction establishments with payroll. The sample included all construction establishments with a payroll equivalent of 15 or more full-time employees and a sample of those with fewer employees. There were two exceptions: In SIC 1521, sampling was employed in establishments with less than 20 employees because of the large number of establishments in that industry; in SIC 1795, all known establishments were included because of the very small number of establishments in that industry. The data obtained from the sample were inflated to represent all construction establishments with payroll. Complete descriptions of the sampling and estimating procedures will be included in the final reports.

Since the data in this report are based on a sample, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same schedules and procedures. The standard error shown in the tables is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population was surveyed. As calculated for this report, the standard error partially incorporates the effect of random errors of response, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference is less than twice the standard error.

This report does not include figures for separate administrative offices, warehouses, garages, or other auxiliary units which service construction establishments of the same company.

<sup>1</sup> Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 4101-0066. Price \$6.75. 1977 Supplement. Stock No. 003-005-00176-0. Price 90 cents.



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Table 1. Detailed Statistics for Establishments With Payroll: 1977, 1972, and 1967

(Thousands of dollars. Detailed figures may not add to totals because of rounding. For meaning of abbreviations and symbols, see text)

Item	U.S. Summary--construction industries and subdividers and developers			Standard error of estimate (percent)		
	1977	1972	1967	1977	1972	1967
Number of establishments.....	477,821	437,941	368,771	1	1	1
Proprietors and working partners.....	278,219	274,434	270,511	1	1	1
All employees:						
March.....	3,764,254	3,668,194	3,038,721	1	1	1
May.....	4,352,205	4,077,149	3,393,104	1	1	1
August.....	4,567,206	4,475,893	3,740,136	1	1	1
November.....	4,318,382	4,179,628	3,437,012	1	1	1
Average.....	4,254,088	4,145,779	3,436,265	1	1	1
Construction workers:						
March.....	3,099,705	3,034,864	2,572,985	1	1	1
May.....	3,644,502	3,424,013	2,923,346	1	1	1
August.....	3,867,391	3,800,426	3,255,628	1	1	1
November.....	3,620,487	3,509,774	2,960,362	1	1	1
Average.....	3,561,353	3,486,592	2,960,308	1	1	1
Other employees:						
March.....	664,550	633,330	466,262	1	1	1
May.....	707,703	653,136	471,206	1	1	1
August.....	699,816	675,467	482,760	1	1	1
November.....	697,896	669,854	477,654	1	1	1
Average.....	693,535	661,429	482,052	1	1	1
Payroll, all employees.....	54,772,448	40,004,782	24,213,187	1	1	1
Payroll, construction workers.....	43,126,133	32,187,130	19,855,476	1	1	1
Payroll, other employees.....	11,646,315	7,817,652	4,360,146	1	1	1
First quarter payroll, all employees.....	11,214,912	(NA)	(NA)	1	(NA)	(NA)
Employer costs for fringe benefits.....	10,489,896	(NA)	(NA)	1	(NA)	(NA)
Legally required expenditures.....	5,923,173	(NA)	(NA)	1	(NA)	(NA)
Voluntary expenditures.....	4,566,723	(NA)	(NA)	1	(NA)	(NA)
All business receipts.....	222,928,823	155,849,652	95,925,449	1	1	1
Total construction receipts.....	213,533,522	149,429,496	92,588,002	1	1	1
Receipts for work subcontracted in from others.....	49,712,636	30,857,137	17,959,822	1	1	1
Other business and land receipts <sup>1</sup> .....	9,395,303	6,420,156	3,341,090	1	1	1
Net construction receipts.....	164,214,319	111,232,179	69,520,058	1	1	1
Value added.....	98,521,021	68,197,327	42,322,697	1	1	1
Selected payments.....	121,103,704	84,623,758	52,451,424	1	1	1
Materials, components, and supplies.....	67,781,854	246,426,441	29,378,373	1	1	1
Construction work subcontracted to others.....	49,319,202	38,197,317	23,069,834	1	1	1
Selected power, fuels, and lubricants.....	4,002,648	(NA)	(NA)	1	(NA)	(NA)
Electricity.....	482,469	(NA)	(NA)	1	(NA)	(NA)
Natural gas.....	420,853	(NA)	(NA)	1	(NA)	(NA)
Gasoline and diesel fuel.....	2,618,116	(NA)	(NA)	1	(NA)	(NA)
Lubricating oils and greases.....	354,725	(NA)	(NA)	1	(NA)	(NA)
Other.....	126,614	(NA)	(NA)	1	(NA)	(NA)
Rental payments for machinery, equipment, and structures.....	2,970,136	(NA)	(NA)	1	(NA)	(NA)
For machinery and equipment.....	2,451,074	1,972,054	1,224,947	1	1	1
For structures.....	519,063	(NA)	(NA)	1	(NA)	(NA)
Selected purchased services.....	4,135,505	(NA)	(NA)	1	(NA)	(NA)
Communication.....	1,006,648	(NA)	(NA)	2	(NA)	(NA)
Repairs to structures and related facilities.....	220,227	(NA)	(NA)	3	(NA)	(NA)
Repairs to machinery and equipment.....	2,908,631	(NA)	(NA)	1	(NA)	(NA)
Capital expenditures.....	6,268,200	3,871,388	2,091,021	1	1	1
New.....	5,084,599	3,141,953	1,661,297	1	1	1
Structures and related facilities.....	1,226,350	675,159	325,319	2	4	2
Machinery and equipment, including automobiles and trucks.....	3,858,250	2,466,794	1,335,978	1	1	1
Automobiles and trucks intended primarily for highway use.....	1,549,348	(NA)	(NA)	1	(NA)	(NA)
Used.....	1,183,603	729,435	429,724	1	2	2
Structures and related facilities.....	141,672	172,686	105,544	2	4	3
Machinery and equipment, including automobiles and trucks.....	1,041,931	556,749	324,180	1	2	2
Fixed assets and depreciation:						
Gross book value of depreciable assets at end of year.....	36,793,279	23,238,226	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	18,155,389	11,183,944	(NA)	1	1	(NA)
Net value of depreciable assets at end of year.....	18,637,893	12,054,282	(NA)	1	1	(NA)
Depreciation charges during year.....	3,602,833	2,554,276	(NA)	1	1	(NA)
Structures, additions, and related facilities:						
Gross book value of depreciable assets at end of year.....	8,515,000	5,092,576	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	2,508,787	1,281,923	(NA)	1	2	(NA)
Net value of depreciable assets at end of year.....	6,006,213	3,810,653	(NA)	1	2	(NA)
Depreciation charges during year.....	424,497	304,975	(NA)	1	2	(NA)
Machinery and equipment:						
Gross book value of depreciable assets at end of year.....	28,278,280	18,145,650	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	15,646,602	9,902,021	(NA)	1	1	(NA)
Net value of depreciable assets at end of year.....	12,631,679	8,243,629	(NA)	1	1	(NA)
Depreciation charges during year.....	3,178,336	2,249,301	(NA)	1	1	(NA)

<sup>1</sup>For 1977 land receipts for Operative Builders (SIC 1531) were \$2,157,684 and for Subdividers and Developers, Except Cemeteries (SIC 6552) were \$1,146,414.<sup>2</sup>Includes data for power, fuels, and lubricants, now shown separately.

Table 2. Construction Receipts for Establishments With Payroll by Type of Construction: 1977 and 1972

(Thousands of dollars. Detailed figures may not add to totals because of rounding. For meaning of abbreviations and symbols, see text)

Item	U.S. Summary--construction industries and subdividers and developers	Standard error of estimate (percent)			
		1977	1972	1977	1972
Construction receipts.....	213,533,522	149,429,496		1	1
Building construction.....	142,557,544	106,461,356		1	1
Single-family houses.....	55,403,350	32,111,069		1	1
Apartment buildings.....	10,155,673	13,907,827		1	1
Other residential buildings.....	2,945,762	2,992,663		1	1
Farm buildings.....	1,479,968	661,446		2	5
Industrial buildings and warehouses.....	27,163,286	18,532,893		1	1
Office and bank buildings.....	12,784,421	11,416,306		1	1
Stores, restaurants, public garages, and automobile service stations.....	9,379,305	6,967,022		1	1
Religious buildings.....	2,204,327	1,550,400		1	2
Educational buildings.....	8,687,812	9,348,007		1	1
Hospitals and institutional buildings.....	9,545,640	6,789,081		1	1
Amusement, social, and recreational buildings.....	1,537,881	1,465,701		1	2
Other nonresidential buildings.....	1,270,120	718,941		2	2
Nonbuilding construction.....	57,906,381	36,495,641		1	1
Highways, streets, and related facilities.....	14,764,887	11,248,112		1	1
Outdoor swimming pools.....	926,301	597,813		2	3
Airports.....	64,119	145,217		3	2
Parking areas.....	169,470	300,565		4	3
Fencing.....	388,669	261,604		3	3
Recreational facilities.....	148,876	(NA)		4	(NA)
Bridges and elevated highways.....	2,614,441	2,429,782		1	2
Tunnels.....	296,900	237,431		1	2
Dams and reservoirs.....	958,494	704,813		1	1
Marine construction.....	1,052,622	529,866		1	3
Harbor and port facilities.....	427,448	287,729		1	2
Conservation and development construction.....	1,309,522	800,192		2	2
Power and communication transmission lines, towers, and related facilities.....	2,779,710	1,837,610		1	2
Sewers, water mains, and related facilities.....	7,554,729	5,048,340		1	1
Pipeline, other than sewer or water lines.....	2,599,788	1,135,610		1	2
Mass transit construction.....	1,317,031	568,542		1	2
Blast furnaces, petroleum refineries, and chemical complexes.....	7,385,661	3,011,773		1	1
Power plants.....	8,020,001	4,691,944		1	1
Sewage treatment and water treatment plants.....	3,951,713	1,925,206		1	2
Miscellaneous heavy military construction.....	179,114	118,995		1	1
Other nonbuilding construction.....	996,885	614,497		2	2
Construction work not specified by kind.....	13,069,597	6,472,499		1	1

Note: See text for explanation of duplication.

Data for separate central administrative offices and auxiliaries are collected in the enterprise statistics survey, a part of the economic censuses.

This report is the final one in the series presenting preliminary results from the 1977 Census of Construction Industries. It will be superseded by a more detailed final report. In addition to data for establishments with payroll presented in this preliminary report, the final report will present limited data for construction establishments with no payroll during 1977. Final reports also will be issued for each of the construction industries during the coming months.

The totals of construction receipts reported by all construction establishments in each of the several industry, State, or other groupings in this census contain varying amounts of duplication, since the construction work (and the receipts) of one firm may be subcontracted out to other construction firms and, therefore, will be included in the subcontractor's receipts. To avoid this duplication, a "net construction receipts" figure has been derived by subtracting the payments made for construction work subcontracted to others from the construction receipts.

Usually, "value added" is the best measure for comparing the relative economic importance of industries or areas. It eliminates the duplication in receipts because of subcontracting. It

also eliminates from the output measure the cost of materials, which differs in relative importance among areas and industries. For this census, "value added" is equal to all business receipts less payments for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for industries for which land receipts are significant, "value added" is equal to all business receipts less land receipts, payments for construction work subcontracted to others, and payments for materials, components, supplies, and fuels.

The symbols in the tables mean:

- Represents zero.
- D Withheld to avoid disclosing figures for individual companies; figures are included in higher level totals.
- S Withheld because estimates did not meet publication standards on the basis of either the associated standard error or a consistency review.
- Z Standard error of estimate is greater than zero but less than 1 percent.
- a Sampling error is greater than 40 percent.
- NA Not available; data were not collected.

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